REMARKS

In the Office Action mailed October 6 2004, the Examiner noted that claims 1-43 were pending, withdrew claims 1-5, 14-24, 26-29, 31-34, 36-39 and 41-43 with 6-13, 25, 30, 35, 40 and 44 pending for examination, and rejected claims 6-13, 25, 30, 35, 40 and 44. Claims 6, 25, 30, 35, 40 and 44 have been amended, and, thus, in view of the forgoing claims 6-13, 25, 30, 35, 40 and 44 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections are traversed below.

In the Office Action the Examiner rejected claims 6, 25, 30, 35 and 40 under 35 U.S.C. section 112 paragraph 2 as indefinite. The claims have been amended in consideration of the Examiner's comments and it is submitted they satisfy the requirements of the statute. If additional concerns with the claims arise, the Examiner is invited to telephone to resolve the same. Suggestions by the Examiner are also welcome. Withdrawal of the rejection is requested.

Pages 4 and 5 of the Office Action reject claims 6-13, 25, 30, 35, 40 and 44 under 35 U.S.C. § 103 over various combinations of Suzuki, Kinjo and Matsuda.

The Examiner acknowledged that Suzuki does not teach managing data before a write access occurs. The Examiner alleges that Kinjo teaches this feature.

Kinjo is directed to a dual memory system in which a write memory access is inhibited to a first memory (300) when a failure occurs in the second memory (310). The inhibiting is designed to allow the failed memory to be repaired before an external write access to the failed memory occurs. According to our understanding when a back-up memory 310 has failed, and a memory copy mode operation that copies from memory 300 to memory 310 is initiated to repair the memory 310, write access to memory 300 is inhibited. The copy operation is allowed to be completed from 300 to 310, so that the memory 310 is repaired and they become identical in content. Then write access to memory 300 as well as memory 310 is enabled. In this situation, the inhibiting occurs only when the system is in the copy mode designed for failure repair.

In contrast, the present invention creates a log copy of original data before a memory write access (see claims 6, 25, 30, 25, 40 and 44). A log copy created "before" a write access is very different from a type repair copy initiated when there is a failure and which is designed to repair the memory. It is submitted that for this reason, the present invention distinguishes over the prior art and withdrawal of the rejection is requested.

The present invention calls for, at the time a write access is to occur, managing the data

to be written as a log. That is, a log entry is created for the data. The logs created by accesses by plural computers are then joined (gathered) to form an "entire log". When it comes time to create a backup, the log is used to form data for a back-up start point. The prior art does not teach or suggest this.

In addition, the data is held in duplication by Kinjo and a latch mechanism is used for exclusive control of the reading and writing of data and generating it's duplicate. In the present invention, because the original data is managed as a log at the time of writing (assessing ... to write") by the computers to the memory, there is no duplication of data. As a result, data control is exclusive enduring data consistency. For this additional reason, it is submitted that for this reason, the present invention distinguishes over the prior art and withdrawal of the rejection is requested.

As noted above, the Examiner appears to be comparing the repair copy of Kinjo to the log copy of the present invention. These two types of copies are different. Log copies include characteristics that repair copies do not, such time of log, area of log, and name of device (see specification). The claims of the present invention emphasize that when a log copy is made, a time of the log is recorded, such as managing original data before a write access occurs as a log "including recording a time of the log" - see claims 6, 25, 30, 35, 40 and 44. For this further reason, it is submitted that for this reason, the present invention distinguishes over the prior art and withdrawal of the rejection is requested.

The present invention also gathers or accumulates the logs of two or more computers and forms a back-up start point from the accumulated logs. Suzuki and Kinjo (as well as Masuda) do not teach or suggest gathering pre-write access original data logs from plural computers to create a back-up start point. Suzuki discuses forming temporary logs of "back-out" data used to back out (not back-up) database changes. However, the log back-out file is designed to restore the log of a failed (or fault) system (see Suzuki, col. 5, lines 59-65) not to create a system back-out start point. That is, the log file as taught by Suzuki is not used to as a memory content back-up point but to restore a log. Suzuki does not teach accumulating a shared log for memory content restoration or back-up purposes as in the present invention. For this still further reason, it is submitted that for this reason, the present invention distinguishes over the prior art and withdrawal of the rejection is requested.

It is submitted that the invention of independent claims distinguishes over the prior art and withdrawal of the rejection is requested.

The dependent claims depend from the above-discussed independent claims and are

11

patentable over the prior art for the reasons discussed above. The dependent claims also recite additional features not taught or suggested by the prior art. For example, claim 12 emphasizes writing the log over backup data. The prior art does not teach or suggest such. It is submitted that the dependent claims are independently patentable over the prior art.

It is submitted that the claims satisfy the requirements of 35 U.S.C. section 112. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.
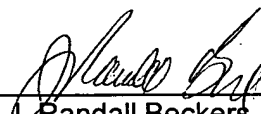
Respectfully submitted,

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